



1986

Accelerated Thinking: Its Relation to Manic Pathology, Phase of Illness and Psychosis among Psychiatric Patients

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ACCELERATED THINKING: ITS RELATION TO MANIC
PATHOLOGY, PHASE OF ILLNESS, AND PSYCHOSIS AMONG
PSYCHIATRIC PATIENTS

by

Elizabeth Ann Rice

A Thesis Submitted to the Faculty of the Graduate
School of Loyola University of Chicago in Partial
Fulfillment of the Requirements for the Degree of
Master of Arts

April

1986

ACKNOWLEDGEMENTS

The author would like to express her appreciation to the members of her committee: to Dr. Alan S. DeWolfe, the director, for his continued support, encouragement, and expert guidance; to Dr. James Johnson, for his valuable comments and suggestions during the preparation of the thesis; and finally, to Dr. Martin Harrow, whose support and advice made the research possible.

The author is indebted to Louis Fogg, for his skilled assistance in the analysis of the data, and for his friendship, commitment, and professionalism throughout the process.

The author is grateful to the research members of the Chicago Followup Study at Michael Reese Hospital for their help during the collection of the data, and to Dr. Linda S. Grossman, who provided valuable guidance during the initial phases of the thesis.

Finally, deepest thanks are due to Joseph M. Feder, the author's husband, for his rare devotion, continued affection, and ability to make sacrifices, all of which saw this thesis to it's completion.

VITA

The author, Elizabeth A. Rice, is the daughter of Gunther Rice and Celia (Freemond) Rice. She was born on September 11, 1958, in Chicago, Illinois.

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Papers and Presentations

Rice, E.A., Kettering, R.K., Harrow, M., Meltzer, H.Y., and Grossman, L. "Disorder affect: Is it a factor in the development of psychosis?" Paper presented at the 1982 Annual Convention of the American Psychological Association, Washington, D.C.

Kettering, R.K., Harrow, M.H., Silverstein, M.L., Rice, E.A., and Meltzer, H.Y. "The psychotic process: A longitudinal perspective." Paper presented at the 1982 Annual Convention of the American Psychological Association, Washington, D.C.

Kettering, R.K., Harrow, M., Meltzer, H.Y., Grossman, L., and Rice, E.A. "Psychosis: Is it relevant in depression?" Paper presented at the 1981 Annual Convention of the American Psychiatric Association, Toronto, Canada.

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CHAPTER I

REVIEW OF RELATED LITERATURE

Introduction and Background

To date few investigations in the research literature have systematically addressed the phenomenon known as "racing thoughts," although speeded thinking has been observed in psychiatric patients with surprising regularity over the years (Bleuler, 1950; Braden & Ho, 1981; Carlson & Goodwin, 1973; Kraepelin, 1921; Redlich & Freeman, 1966). Autobiographical accounts of accelerated thinking, dating back to the beginning of the century (Reid, 1910), have also appeared recently in the clinical literature (Freeman, 1974; Lerner, 1980). Anecdotal accounts of the racing thoughts that can accompany emotional disturbance can also be found outside the psychiatric literature. For example, during a psychiatric hospitalization in the final television episode of M.A.S.H., Captain Hawkeye Pierce complains to his psychiatrist that "I can't get my thoughts to slow down!"

The concept of racing thoughts has its historical origins in Kraepelin's (1921) descriptions of the "flight of ideas" he observed in manic patients. The experience of accelerated thinking has since remained

closely associated with the "high" of the manic episode. Kraepelin originally explained the flight of ideas he observed as being a function of manic patients' heightened distractibility and the loosening of the connections in their train of ideas. Kraepelin was the first to formally emphasize that the manic patient's subjective experience of the rapidity of his thinking constituted an important component of the thought disturbance in mania.

Since Kraepelin, flight of ideas has often been used in the psychiatric literature to refer to the rapid succession of ideas as expressed in manic speech. The Present State Examination (PSE; Wing, Cooper and Sartorius, 1974) uses the term "flight of ideas" to describe the speech of manic persons and the term "ideomotor pressure" for its subjective equivalent, in which "images and ideas flash through the mind at a fast rate." The diagnostic criteria for mania in both the DSM III (1980) and the Washington University criteria set (Feighner, et al., 1972) include verbal flight of ideas and subjective racing thoughts as equivalent symptoms.

Interestingly, recent investigators of racing thoughts have incorporated the qualitative distinction between subjective flight of ideas and speeded thinking

in their research. In a recent investigation utilizing interview data, Braden and Ho (1981) assessed flight of ideas with questions such as "Do you have lots of ideas or images racing through your mind?" Speeded thinking was assessed by the question "Have you noticed that your thoughts are faster or slower than usual?" The current investigation makes a similar distinction between the experience of having flight of ideas and having racing thoughts. In assessing racing thoughts, the current study focuses primarily on patients' perception of the rate of their thought process.

Racing Thoughts in Mania

The accelerated thought processes that have been observed in manic patients can be seen as one component of the general acceleration of their psychomotor functioning. Also characteristic of the symptom picture are elation of mood, distractibility, and "delusions with an omnipresent and omnipotent content" (Freeman, 1971). Clayton (1965) found that a triad of euphoria, overactivity, and pressured speech consistently characterized manic patients, and reported this symptom triad to be present in 100% of a sample of 31 manic patients.

In clinical settings, pressured speech is often taken as an indicator of speeded thinking, although pressured speech and flight of ideas do not always co-occur in manic patients. For example, Carlson and Goodwin (1973) found that pressure of speech occurred in 100% of their sample of manic patients though only 75% of these patients were rated as manifesting flight of ideas. Similarly, in a study of 52 manic patients, Taylor and Abrams (1973) found that pressured speech occurred in 100% of the sample, whereas flight of ideas occurred in 77% of these patients.

These data would seem to indicate that the great majority of hospitalized manic patients exhibit flight of ideas as expressed in their speech. Whether similar proportions of manic patients report having the subjective experience of racing thoughts has not yet been formally assessed.

Current investigators have not fully addressed the question of how to conceptualize the phenomenon of racing thoughts within the context of the manic pathology. Several recent studies, however, have contributed to our knowledge of manic thought pathology (Andreason, 1979; Harrow & Grossman, 1982) and the relationship between the cognitive and affective disturbance in mania (Akiskal & Puzantian, 1979).

Carlson and Goodwin's (1973) detailed analysis of the stages of mania has shed some light on how accelerated thinking can be conceptualized with respect to the course of the affective disturbance. These investigators studied a sample of 20 patients over the duration of their hospitalization and identified three stages of the manic episode. According to Carlson and Goodwin, increased initiation and rate of speech occurred during the initial phase of the episode, which was characterized by euphoric mood. Patients described having racing thoughts during this stage, but their thoughts were "coherent" and they were "not out of control." During the second or intermediate stage, psychomotor activity increased further and mood was more prominently characterized by increasing dysphoria and depression. At this point "racing thoughts progressed to a definite flight of ideas with increasing disorganization of the cognitive state" (p. 224). During the final state, seen in 70% of the patients, thought processes "that earlier had been difficult to follow now became incoherent and a definite loosening of associations was often described." Bizarre, frenzied psychomotor activity and schizophrenic-like delusions were observed in patients at this stage.

Carlson and Goodwin's investigation has some interesting implications concerning the role of racing thoughts in mania. Their data would seem to suggest that racing thoughts occur along a continuum of severity which coincides with the progression of the manic episode. Moreover, the data hint that increasing cognitive disorganization accompanies the progression of the racing thoughts. Consistent with the general findings of Carlson and Goodwin (1973) in this respect are the observations of Bunney (1972) on the "switch process" in manic-depressive illness. Bunney (1972) studied the manic-depressive cycle longitudinally, and described flight of ideas, accompanied by bizarre and psychotic ideation, as occurring only in the third and final phase of the manic period.

Racing Thoughts and Diagnosis

Though racing thoughts have been described as a primary symptom in mania, accelerated thinking has been associated with other diagnostic groups as well. Interestingly, Kraepelin (1971) described "thronging" or "pushing of thoughts" in *dementia praecox*. Often these thoughts were experienced as alien. Bleuler (1950) also described pressure of thoughts as characteristic of

schizophrenia. Detre and Jarecki (1971) mentioned that speeded thinking is one element of the "schizophreniform cognitive mode" and is characteristic of acute schizophrenic illness. In their view, speeded thinking is indirectly associated with the overinclusive thinking, increased awareness, and the heightened sensory input thought to be characteristic of schizophrenics.

Freedman's (1974) review of autobiographical reports of schizophrenic patients provides some compelling evidence of the existence of racing thoughts in schizophrenics. Freedman reported that the experience of racing thoughts was apparently one of the earliest, and most frightening cognitive changes experienced by the patients. Patients' subjective experiences were gathered from 60 autobiographical books and articles written by schizophrenics during or after their psychotic episodes. According to Freedman, patients complained that

They had too many thoughts at once, so that they could not sort them out. They said that their thoughts were moving too quickly for them to follow each one out to completion. Therefore, their thoughts were more like fragments or pieces of thought than like fully developed ideas. (p. 335)

This account sounds strikingly similar to Kraepelin's (1921) early description of the "fleeting, isolated

ideas" characteristic of the manic thought process.

Although there have been few controlled investigations of the occurrence of racing thoughts in psychiatric patients, the empirical research data similarly suggests that schizophrenics and other diagnostic groups experience speeded thinking. In one study, Freedman and Chapman (1973) found that schizophrenic patients did not exceed non-schizophrenic patients in reports of racing thoughts. Of the 20 patients in each category, four schizophrenics and five non-schizophrenics reported having racing thoughts during a research interview. Interestingly, the non-schizophrenic sample consisted of non-psychotic patients without any major affective disorder, and thus provides a limited comparison group. These data would seem to suggest, however, that racing thoughts are perhaps a less significant diagnostic symptom than the classical literature implies, and may even occur in patients other than manics and schizophrenics.

In contrast to the classical notion that depressives typically experience slowed thinking and retardation of psychomotor functioning, racing thoughts have recently been documented among depressed patients.

Braden and Qualls (1979) report six case studies of depressed patients for whom racing thoughts were a

prominent symptom. For these patients, racing thoughts were either complained of spontaneously or were "readily identified in response to a question" (Braden & Qualls, 1979, p. 336). Descriptions of the patient's subjective experiences in these cases sounded similar to the flight of ideas reported by manic patients. These investigators suggested that the symptom of racing thoughts may be more related to the "underlying pathology of affective illness" than to either mania or depression. As supportive evidence for this hypothesis, they observed that racing thoughts occur in both the "high" and "low" states of bipolar patients and cyclothymics.

In further exploration of these issues, Braden and Ho (1981) conducted a diagnostic comparison of racing thoughts in psychiatric inpatients, and found that racing thoughts were equally prevalent in hospitalized depressed and manic patients. Racing thoughts were found to be frequent in manic, depressed, and schizoaffective patients and were rare in schizophrenic and "other" patients. Racing thoughts were not reported in a sample of ten reported normal subjects.

In their study, Braden & Ho also explored the association of racing thoughts with other symptoms and found that ideomotor pressure was significantly

associated with disturbed concentration. No significant differences were found in the prevalence of disturbed concentration among the different diagnostic groups.

Braden and Ho found some interesting diagnostic differences, however, regarding the subjective experience of racing thoughts in manics and depressives. Manic patients found racing thoughts more pleasant than depressives, while depressives were more likely to describe racing thoughts as unpleasant. Manic patients were also found to be more likely than depressives to describe themselves as "full of exciting ideas." While the authors note that these findings are unsurprising given the patients' mood state, they caution that hedonic factors may confound the assessment of racing thoughts.

Summary and Implications

Accelerated thinking is a form of thought pathology that is frequently observed among psychiatric (particularly manic) patients. The phenomenon of speeded thinking involves the subjective experience that one's thoughts are moving at too fast a rate. The subjective experience of speeded thinking thus represents a significant alteration of the normal cognitive process.

Some investigators have conceptualized the experience of speeded thinking as being linked to the flight of ideas which are characteristic of the manic syndrome (Kraepelin, 1921). According to this classical view, flight of ideas describe the loosely connected train of ideas expressed in manic speech, while speeded thinking involves the subjective experience that co-occurs with this phenomenon. Thus, speeded thinking and flight of ideas have traditionally been associated with the manic episode, seen as concomitant by-products of the general psychomotor acceleration that occurs in mania.

Though classically associated with mania, racing thoughts have recently been reported among other diagnostic groups. Descriptive accounts of speeded thinking in psychiatric patients other than manics have contributed to our knowledge about this cognitive disturbance but have left several important questions unanswered. To date there have been no systematic empirical investigations of speeded thinking within a large, diagnostically diverse psychiatric population.

The Present Study

The present study investigates the prevalence of accelerated thinking in a broad cross-section of

psychiatric inpatients. The following questions are addressed:

1) Is accelerated thinking primarily a manic phenomenon? Are racing thoughts more common among patients with manic syndromes than among other psychiatric patients?

2) Is accelerated thinking a phenomenon associated with acute disturbance? Are racing thoughts among psychiatric patients more common at the acute phase than the post-acute phase of hospitalization?

3) Is accelerated thinking related to the presence of psychotic symptomatology? Are racing thoughts more common among psychotic than non-psychotic manic patients?

CHAPTER II

METHOD

Patient Sample

The present study reports on 253 psychiatric patients who were part of ongoing research programs at Michael Reese Hospital and the Illinois State Psychiatric Institute (ISPI). Sixty-six of the patients were from Michael Reese Hospital, a private psychiatric facility. The remaining 187 patients in the sample were admitted to ISPI, 126 of whom were from an NIMH funded Mental Health Clinical Research Center unit based at ISPI and the University of Chicago.

Fifty-three percent of the patients were male and 47 percent were female. The mean age on hospital admission for the patients in the sample was 26.3 years, with a standard deviation of 7.9 years. The mean level of education was 12.8 years, with a standard deviation of 2.3 years. The mean length of hospitalization for patients in the sample was 3.3 months with a standard deviation of 2.7 months. Patients in the sample had an average of 1.6 previous hospitalizations, with a standard deviation of 2.5. Forty-four percent of the sample were first admission patients. All patients in the study were diagnosed according to the Research

Diagnostic Criteria (Spitzer, Endicott, and Robins, 1975, 1978). Diagnoses were assigned by senior research clinicians at each psychiatric facility. All diagnoses utilized in the current study were final diagnoses. Information for RDC diagnoses was derived from standardized interviews conducted during hospitalization using the Schedule for Affective Disorders & Schizophrenia (SADS; Endicott & Spitzer, 1978) and the Present State Examination (Wing, Cooper, & Sartorius, 1974). Diagnoses were also facilitated by the use of psychiatric evaluations and hospital chart material.

The sample consisted of 38 manic, 94 depressed, 49 schizoaffective, and 83 schizophrenic patients as diagnosed by the RDC. Fifteen of the schizoaffective patients were schizoaffective manic, 32 were schizoaffective depressed. The depressed patients in the sample were diagnosed as having either major depressive disorder or bipolar depressive disorder. Fifty-one patients comprised a subsample of patients for whom post-acute phase data was analyzed. Subjects within this subsample were assessed at two time periods: First, within the first three weeks of hospital admission (acute phase), and second, six to seven weeks after hospital admission (post-acute phase). The

subsample consisted of five manic, three schizoaffective manic, 18 schizophrenic, 17 depressed and five schizoaffective depressed patients.

Assessment of Racing Thoughts

The subjective experience of racing thoughts was assessed using a written self-report format. Two Likert-type questionnaire items dealing with the experience of speeded thinking were utilized in the present study and were combined to form a racing thoughts scale. These items were drawn from a 55 item self-report questionnaire which has been used successfully in investigations of cognitive and perceptual disturbance in psychiatric patients (Harrow & Tucker, 1972; Tucker & Harrow 1969). The questionnaire items were originally derived from the descriptive literature on the subjective experiences of manic and schizophrenic patients (Harrow & Tucker, 1969).

The correlation between the two questionnaire items was .68 ($p < .001$). The racing thoughts scale was constructed by summing these items.

The questionnaire items comprising the racing thoughts scale are presented in Appendix A. These items specifically assess the subjective experience of speeded thinking. Subjects indicated their responses to the

questionnaire items on a five point Likert-type scale, according to the frequency of their experience. The response scales for each item as they appear in the questionnaire are also presented in Appendix A. As a control for possible response bias, the direction of the scale appeared in reverse order for one of the racing thoughts items. Twenty-one questions about other cognitive and perceptual disturbance separated the racing thoughts items in the questionnaire.

Assessment of Psychosis

All manic patients in the sample were assigned a score to indicate whether psychotic symptoms were present or absent during their hospitalization. Scores were assigned by trained research assistants working in conjunction with the clinical research program at Michael Reese Hospital. Psychosis scores assigned by the research assistants were based on structured research interview data collected during the first three weeks of hospitalization for each patient.

The data utilized for the psychosis scores consisted of interviewer ratings on the Schedule for Affective Disorders and Schizophrenia (SADS) and the Present State Exam (PSE). These interviews were administered by trained research clinicians who had

satisfactorily established inter-rater reliability within their research settings.

The SADS and PSE contain separate ratings for a wide range of individual psychotic symptoms, including delusions, hallucinations, and First Rank (Schneiderian) symptoms. Both the SADS and PSE contain three point rating scales for each psychotic symptom. The rating assigned for each symptom indicates its presence, partial or questionable presence, or absence.

The psychosis scores utilized in the current study were assigned by research assistants after having reviewed all available interview data. The psychosis scores ranged from 1-3, with a score of 1 indicating the absence of any psychotic symptoms, a score of 2 indicating the partial or questionable presence of any psychotic symptoms, and a score of 3 indicating the presence of any psychotic symptoms.

Data Collection Procedures

In conjunction with the research programs at ISPI & MRH, all patients were administered the questionnaire containing the racing thoughts scale within the first three weeks of hospital admission (acute phase). Patients were administered the questionnaire by trained research assistants using the standardized instructions

to answer the items as best and as honestly as they could. The questionnaire was administered a second time to research patients six to seven weeks after their hospital admission (post-acute phase). Data collection techniques during the post-acute phase were identical to those during the acute phase.

CHAPTER III

RESULTS

Accelerated Thinking and Mania

In order to assess whether accelerated thinking is a phenomenon specific to manic pathology, a two-tailed analysis of variance was conducted which compared patients with manic syndromes to patients without manic syndromes on the racing thoughts scale. This analysis compared 36 manic and 16 schizoaffective manic patients to 92 depressed, 33 schizoaffective depressed, and 76 schizophrenic patients. The results of the analysis are presented in Table 1. The analysis indicated a strong but statistically nonsignificant trend for manic patients to have a higher score on the racing thoughts scale than non-manic patients, $F(1, 251) = 2.89$, $p < .10$. Patients with manic syndromes tended to report having slightly more frequent experiences of accelerated thinking than patients without manic syndromes, means = 5.59, ($n = 52$; S.D. = 3.08) and 4.85, ($n = 201$; S.D. = 2.70). The difference between the manic and non-manic groups on the racing thoughts scale was not striking, however, and accounted for only a small percentage of the variance.

Table 1

Analysis of Variance of the Effect of Manic and
Non-Manic Syndromes on the Racing Thoughts Scale

| Source | df | MS | F |
|--------|-----|-------|------|
| Group | 1 | 22.21 | 2.89 |
| Error | 251 | 7.68 | |

In order to examine more closely the diagnostic specificity associated with experiences of accelerated thinking, mean scores on the racing thoughts scale were also computed for each diagnostic group. These scores are presented in Table 2. The data revealed that among the non-manic patient group, schizophrenics tended to have the lowest scores in the racing thoughts scale, lower than both the depressives and schizoaffective depressives. An analysis of variance comparing the five diagnostic groups on the racing thoughts scale did not yield statistically significant results, however, $F(1, 252) = 1.99, p < .10$. The analyses indicated that the mean score on the racing thoughts scale was not significantly different among the diagnostic groups, although there appeared to be a tendency for manic patients to report the most frequent, and schizophrenic patients the least frequent, experiences of accelerated thinking.

Accelerated Thinking at the Acute and Post Acute Phase

In order to assess whether accelerated thinking is associated with the acute phase of psychiatric disturbance, a two factor analysis of variance with repeated measures on the second factor was conducted on the racing thoughts scale for a subsample of 51

Table 2

Mean Score on Racing Thoughts at the Acute Phase for
Patient Sample

| Diagnostic Group | Mean | Standard Deviation | N |
|------------------------------|------|--------------------|----|
| Manic | 5.60 | 2.93 | 36 |
| Depressed | 5.20 | 2.85 | 92 |
| Schizoaffective Manic | 5.56 | 3.23 | 16 |
| Schizoaffective Depressed | 5.17 | 2.86 | 33 |
| Schizophrenic | 4.30 | 2.40 | 76 |

psychiatric patients. The analysis compared patients with manic syndromes to patients without manic syndromes, and utilized time period (acute phase vs. post-acute phase) as the repeated measure. The diagnostic composition of the patient sample utilized in the repeated measures analysis is given in Table 3.

Table 4 presents the results of the repeated measures analysis of variance. The analysis revealed a significant main effect for time period, $F(1, 49) = 11.24$, $p < .002$. Patient scores on the racing thoughts score were generally higher during the acute phase than during the post-acute phase of hospitalization. Within the overall patient sample, experiences of accelerated thinking were generally reported with higher frequencies during the first three weeks of hospitalization than they were later during the hospitalization period. The mean scores on the racing thoughts scale for patients during the acute and post-acute phases were 5.35 and 4.56, respectively. Experiences of speeded thinking thus decreased significantly within the patient sample as a whole six to seven weeks after hospital admission.

The repeated measures analyses of variance also indicated a significant time \times group (manic vs. non-manic) interaction for the racing thoughts scale, $F(1, 49) = 9.02$, $p < .004$. This interaction was probed

Table 3

Diagnostic Composition of Patient Sample for Repeated
Measures Analysis

| Group | Diagnosis | N |
|-----------|---------------------------|----|
| Manic | Manic | 5 |
| Group | Schizoaffective Manic | 3 |
| Non-Manic | Depressed | 17 |
| Group | Schizoaffective Depressed | 5 |
| | Schizophrenic | 18 |

Table 4

Analysis of Variance with Repeated Measures for Racing
Thoughts at the Acute and Post Acute Phases

| Source | df | MS | F |
|--------------|----|-------|--------|
| <hr/> | | | |
| Group | 1 | 0.471 | .07 |
| Error | 49 | 7.004 | |
| | | | |
| Time | 1 | 56.22 | 11.24* |
| Time x Group | 1 | 45.11 | 9.02* |
| Error | 49 | 5.00 | |

*p < .002

using the Newman Keul's technique. The probing yielded the following significant differences: 1) Manic patients were higher on the racing thoughts scale at the acute phase than at the post-acute phase, 2) manic patients at the acute phase were higher on the racing thoughts scale than non-manic patients at the post acute phase, and 3) non-manic patients at the post-acute phase were higher on the racing thoughts scale than manic patients at the post-acute phase. The non-manic patients did not significantly differ from the acute to the post-acute phase. There was a non-significant ($p < .10$) trend for manic patients at the acute phase to be higher on the racing thoughts scale than non-manic patients at the acute phase.

The data indicated that changes over time on the racing thoughts scale were evident for the manic patient group but not for the other psychiatric patients. While patients with manic syndromes showed a marked decrease in frequency of accelerated thinking after the acute phase of hospitalization, patients without manic syndromes did not show significant changes over time regarding the frequency of racing thoughts. Table 5 presents the mean scores on the racing thoughts scale for both patient groups at the acute and post-acute

Table 5

Mean Scores on Racing Thoughts at the Acute and
Post-Acute Phase for Manic and Non-Manic Patients*

| Diagnostic Group | Hospital Phase | | N |
|------------------|----------------|------------|----|
| | Acute | Post Acute | |
| Manic | 7.05 | 3.18 | 8 |
| Non-Manic | 5.04 | 4.82 | 43 |

*Note: Manic patients include three schizoaffective manics and five manics. Non-manic patients include 20 schizophrenic, 17 depressed, and six schizoaffective depressed patients.

phases of hospitalization. The data revealed that only the manic patient group showed a significant reduction in the frequency of accelerated thinking at the post-acute phase during hospitalization. The relationship between patient group and hospital course regarding the frequency of accelerated thinking is illustrated graphically in Figure 1.

A closer examination of the repeated measure data revealed that the main effect for time in the analysis was largely attributable to the manic patient group. One hundred percent of the manic patients in the analysis showed a decrease in frequency of racing thoughts between the acute and post-acute phases of hospitalization. In contrast to the manic group, only 49% of non-manic patients showed a decrease in frequency of racing thoughts over time. Table 6 reports the data on the percentage of change over time for manic and non-manic patients on the racing thoughts scale.

Accelerated Thinking and Psychosis

In order to assess whether accelerated thinking was associated with the presence of psychotic symptoms in manic patients during the acute phase of illness, a two-tailed analysis of variance was conducted which

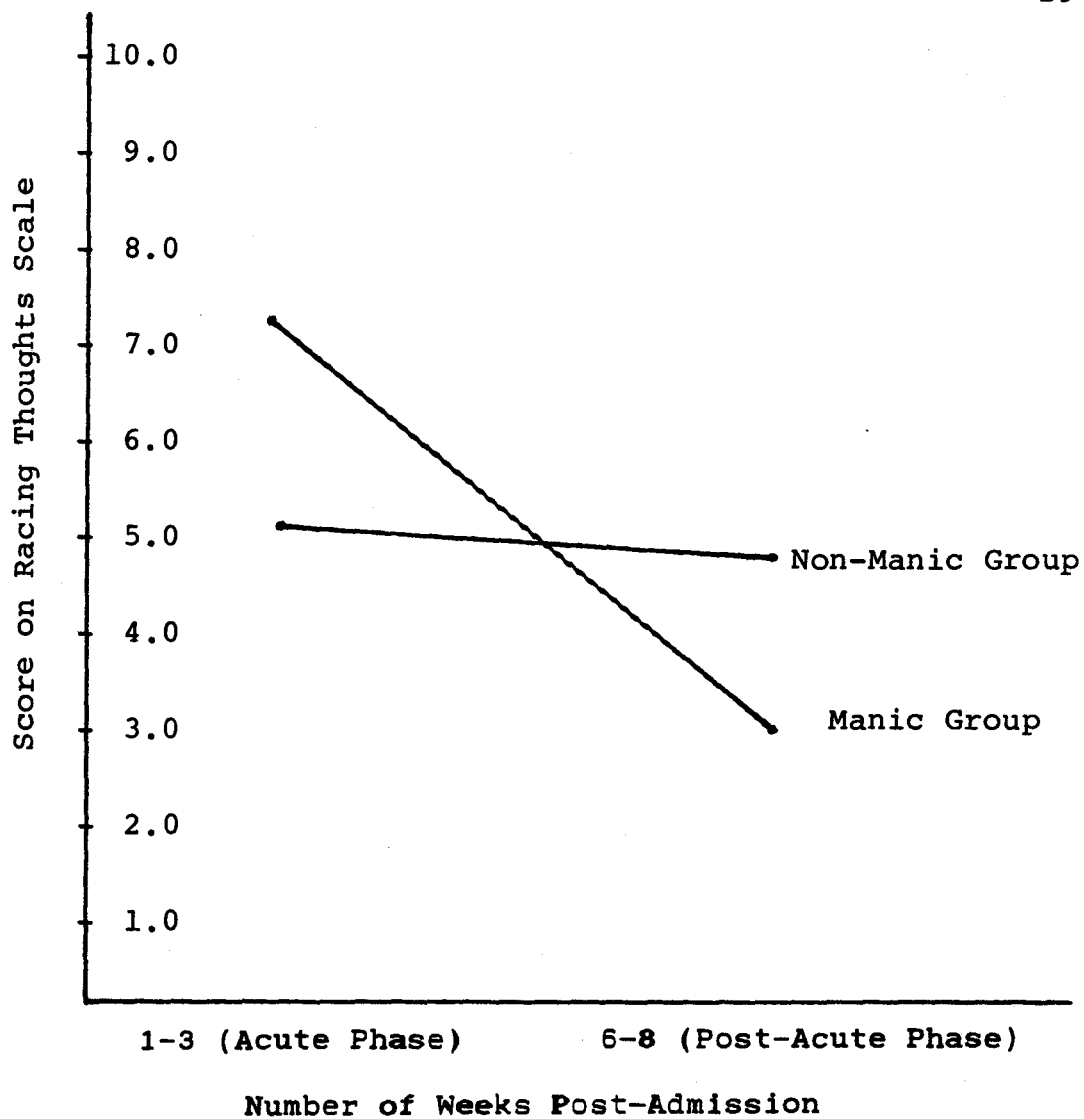


Figure 1. Racing Thoughts at the Acute and Post-Acute Phases During Hospitalization

Table 6

Changes in the Frequency of Racing Thoughts Among
Patients After the Acute Phase

| Patient Group | n | Symptom Change | | |
|---------------|----|----------------|-----------|-----------|
| | | Increased | Decreased | No Change |
| Manic | 8 | 0% | 100% | 0% |
| Non-Manic | 40 | 30% | 52.5% | 17.5% |

compared psychotic and non-psychotic manic patients on the racing thoughts scale. The results of this analysis indicated that there were no significant differences between the psychotic and non-psychotic manic groups on the racing thoughts scale, $F=.45$, $p = n.s.$ The psychotic manic patients tended to be only slightly higher than the nonpsychotic manic patients on the racing thoughts scale (means = 5.94 and 5.25, respectively). Thus, experiences of accelerated thinking were not found to be more frequent among manic patients with psychotic symptoms than among non-psychotic manic patients. The data indicated that severity of accelerated thinking is not significantly associated with the presence of hallucinations or delusions for manic patients during the acute phase of illness.

CHAPTER IV

DISCUSSION

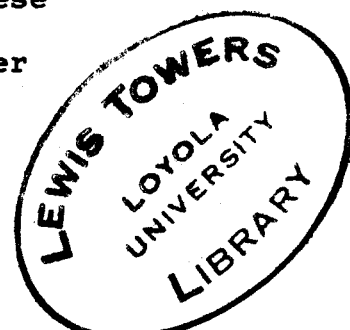
Accelerated thinking has classically been conceptualized as a cognitive disturbance of the manic episode. The subjective experience of accelerated thinking has been thought to co-occur with the flight of ideas in mania, related to the psychomotor acceleration characteristic of manic syndromes. According to this view, racing thoughts would be expected to occur predominantly in patients who are experiencing manic syndromes. Such patients would be expected to experience racing thoughts amidst other hallmark symptoms of manic pathology, such as overactivity, pressured speech, and flight of ideas.

The present study addressed the issue of whether accelerated thinking is a product of manic pathology by assessing whether racing thoughts were more common in patients with manic syndromes than in other psychiatric patients, including depressives and schizophrenics.

The results of the current study lend mild support for the classical conceptualization of accelerated thinking as a primarily manic phenomenon. At the acute phase of illness, patients with manic syndromes showed a nonsignificant trend to have more experiences of speeded

thinking than did schizophrenic, depressed, and schizoaffective depressed patients. It should be noted, however, that there were no marked differences between manic and non-manic patients regarding the reported frequency of racing thoughts. While experiences of speeded thinking were somewhat more common among manic patients than among other psychiatric patients as a whole, these diagnostic differences did not account for a large percentage of the variance in the data.

From these findings it may be hypothesized that the pathology of the manic syndrome is only one factor that can account for experiences of accelerated thinking. Other factors apparently need to be considered as well. The experience of racing thoughts does not seem to be sufficiently explained by the presence of a manic syndrome alone. Manic syndromes may be associated with accelerated thinking for a subgroup of psychiatric patients, but do not appear to explain the occurrence of speeded thinking among psychiatric patients in general. Patients for whom manic affect is not a salient factor also appear to experience speeded thinking during the acute phase of illness. These results provide support for the findings of other investigators who have reported experiences of



accelerated thinking among hospitalized depressives (Braden and Qualls, 1979) and schizophrenics (Freedman and Chapman, 1973).

Explanations for the occurrence of racing thoughts in patients other than manics need to be investigated. It seems particularly important to include a sample of normal control subjects in a future investigation of racing thoughts to assess whether this disturbance can be conceptualized as a strictly clinical phenomenon. At present, it is unclear how to conceptualize accelerated thinking when it occurs outside of a manic syndrome, and some investigators have already hinted at the possibility that racing thoughts in manic and non-manic patients may not necessarily represent the same psychopathologic process (Braden and Qualls, 1979).

Some tentative hypotheses can be stated, however, regarding the nature of the accelerated thinking that occurs within the context of a manic syndrome. It appears possible that euphoric mood in particular may be one factor related to the experience of speeded thinking that occurs within manic and schizoaffective disorders. In one recent study, euphoric mood (investigated as one particular component of manic affect) was found to be significantly correlated with ideomotor pressure, or speeded thinking, in a large sample of hospitalized

manic patients (Rice, Kettering, Harrow, Grossman, and Meltzer, 1982). Consistent with these results, the study also found that ideomotor pressure was negatively correlated with irritable mood.

A second way of understanding the phenomenon of accelerated thinking is to conceptualize it as an acute phase disturbance. The present investigation provides strong evidence that when considered at an overall level, racing thoughts decline among hospitalized psychiatric patients after the acute phase of illness. Although in the current study, the decrease in accelerated thinking after the acute phase was predominantly attributable to the manic and schizoaffective manic patients, patients in other diagnostic groups, including depressives and schizophrenics, contributed to the overall effect as well. Thus, racing thoughts do appear to decline in general after the initial weeks of a psychiatric hospitalization. This fact suggests that accelerated thinking may be a type of cognitive disturbance particularly characteristic of patients in acute distress, but is not necessarily a chronic symptom of psychopathology.

In this context it is particularly significant that accelerated thinking was found to markedly decline

in patients with manic syndromes relative to patients without manic syndromes. The current data revealed that for manic and schizoaffective manic patients, speeded thinking significantly decreases after the acute phase, whereas for other psychiatric patients this phenomenon does not occur.

One explanation for this finding might be that racing thoughts are a salient acute phase phenomenon only for patients with a manic affective disturbance. Racing thoughts, while they do occur in schizophrenic and depressed patients, may be a less salient issue for these groups.

The results of the current investigation thus support a conceptualization of accelerated thinking as an acute phase phenomenon for manic patients. According to this view, racing thoughts in manic patients should not be considered to be a permanent part of their thinking. When accelerated thinking does occur within a manic syndrome, it seems likely to subside after the acute phase.

The current research findings also suggest that when racing thoughts are present in schizophrenic and depressed patients they usually remain a stable occurrence across time, and may signify a pathology of

thought process that is unrelated to an acute disturbance. Accelerated thinking, when it occurs in certain schizophrenic patients, may remain a relatively chronic symptom. Similarly, there appears to be a subgroup of depressed patients for whom racing thoughts do not remit even after several weeks of hospitalization. Speeded thinking in these depressives may indicate a disturbance of cognitive process unrelated to depressed affect. Further research documenting the specific relationship between mood disturbance and speeded thinking in depressives would be necessary to explore this issue sufficiently. Some evidence has already accumulated, however, which has indicated that the presence of thought pathology in some depressives cannot be attributed to the severity of the affective disturbance. For example, Rice et al. (1982) found that severity of depressive affect did not sufficiently explain the presence of psychotic symptoms among a large group of hospitalized depressed patients.

Finally, the current investigation has theoretical implications for whether accelerated thinking can be conceptualized as a psychotic phenomenon. Several writers have noted that severely manic patients often experience delusions of a grandiose or omnipotent

nature. These psychotic symptoms have classically been considered to be an outgrowth of the manic affective disturbance, related to the extreme quality of the manic affect (Akiskal and Puzantain, 1979). Consistent with this framework, a recent study found that ideomotor pressure in manic patients was significantly associated with the presence of grandiose delusions (Rice, et al., 1982). In addition, previous investigators have observed that psychotic disorganization in manic patients is usually accompanied by severe experiences of racing thoughts (Carlson and Goodwin, 1923).

In contrast to these findings, the data from the current investigation provide no evidence that racing thoughts are associated with the presence of psychotic symptoms in manic patients. While accelerated thinking does appear to be a salient acute phase phenomenon for manic patients, psychotic symptoms are not necessarily a correlate of racing thoughts at the acute phase. The current investigation indicates that racing thoughts do not appear more common among psychotic than among non-psychotic manic patients. Thus speeded thinking during the acute phase of manic syndromes does not appear related to psychotic thinking.

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APPENDIX A

Item Composition of the Racing Thoughts Scale

1. Lately have there been times when you are thinking very fast -- almost too fast for you -- and you can't slow down your thoughts?

1 = Not at all.
2 = Once or twice.
3 = A number of times.
4 = A great many times.
5 = Almost all the time.

2. Recently have you had times when your thoughts seem to be racing -- going to fast for you?

1 = Not at all.
2 = Once or twice.
3 = A number of times.
4 = A great many times.
5 = Almost all the time.

APPROVAL SHEET

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The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

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